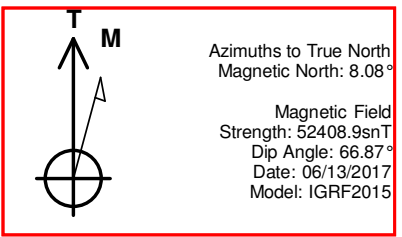


Well Name: Huron 1N
 Surface Location: Huron 5N64W22
 North American Datum 1983
 US State Plane 1983, Colorado Northern Zone
 Ground Elevation: 4598.0
 WELL @ 4621.0usft (Original Well Elev)

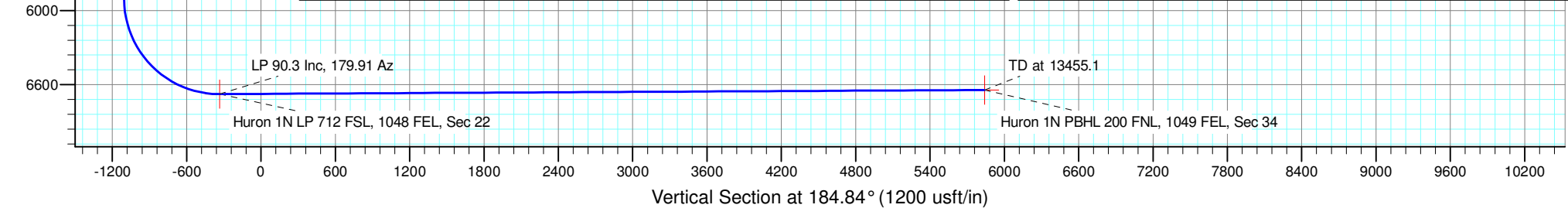
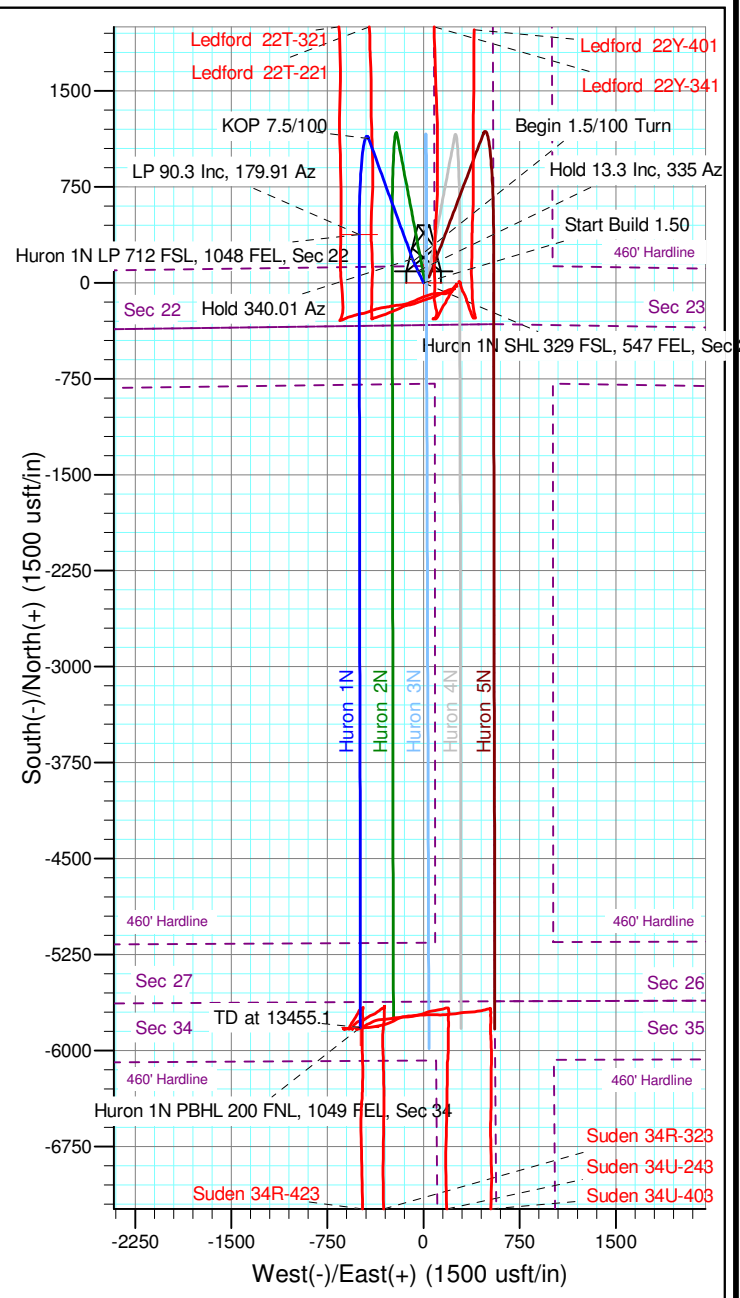
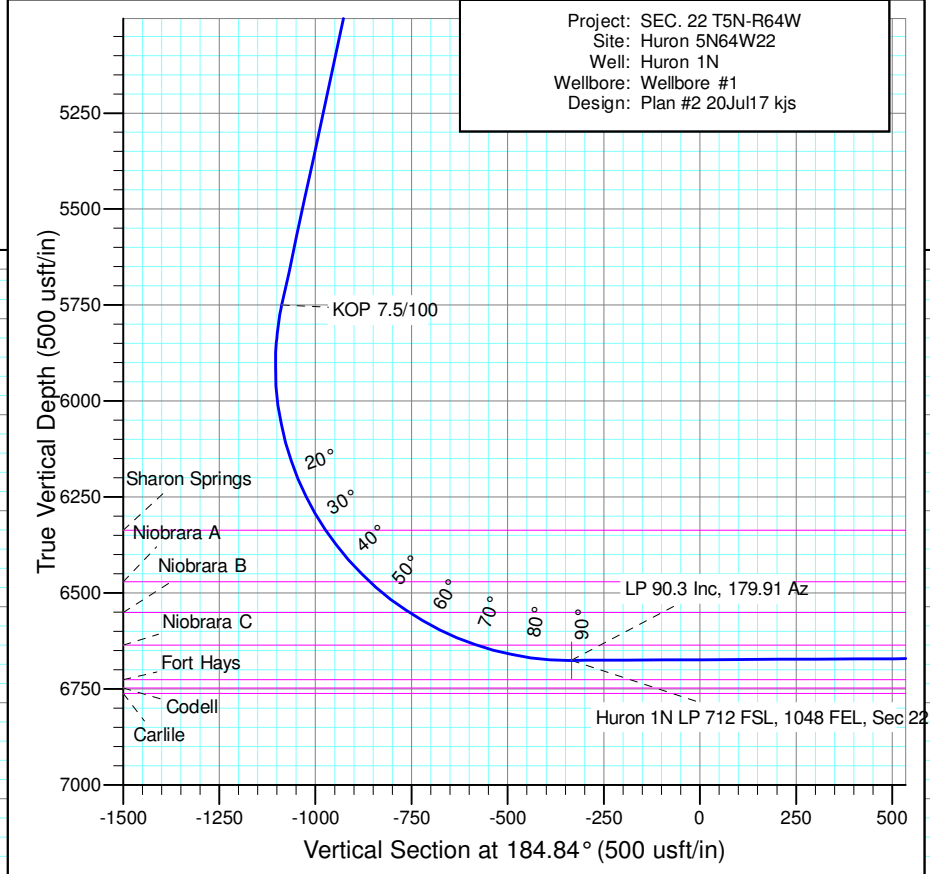
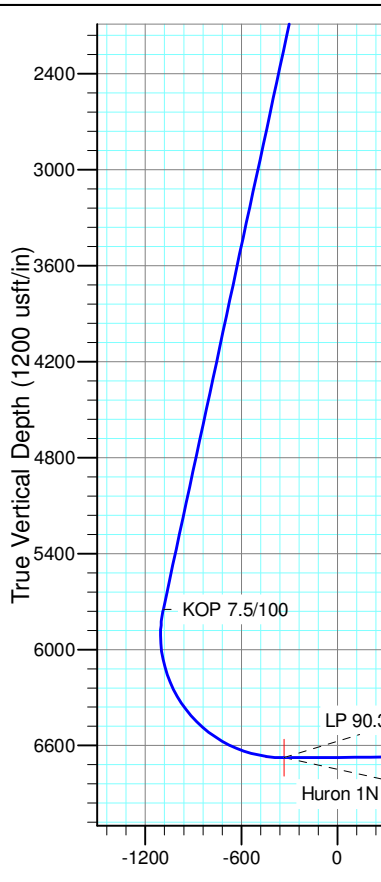
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1382221.23	3270699.20	40° 22' 42.700 N	104° 31' 42.004 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	1086.7	13.30	335.00	1078.7	92.9	-43.3	1.50	335.00	-88.9	
4	1461.7	13.30	335.00	1443.7	171.0	-79.8	0.00	0.00	-163.7	
5	1538.4	13.30	340.01	1518.4	187.3	-86.5	1.50	92.53	-179.4	
6	5886.5	13.30	340.01	5749.9	1127.2	-428.5	0.00	0.00	-1087.1	
7	7257.1	90.30	179.91	6676.0	377.2	-502.2	7.50	-159.57	-333.5	Huron 1N LP 712 FSL, 1048 FEL, Sec 22
8	13455.1	90.30	179.91	6643.1	-5820.7	-492.6	0.00	0.00	5841.5	



Project: SEC. 22 T5N-R64W
 Site: Huron 5N64W22
 Well: Huron 1N
 Wellbore: Wellbore #1
 Design: Plan #2 20Jul17 kjs





PDC Energy Inc. DJ Basin

SEC. 22 T5N-R64W

Huron 5N64W22

Huron 1N

Wellbore #1

Plan #2 20Jul17 kjs

Anticollision Report

20 July, 2017

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Huron 1N
Project:	SEC. 22 T5N-R64W	TVD Reference:	WELL @ 4621.0usft (Original Well Elev)
Reference Site:	Huron 5N64W22	MD Reference:	WELL @ 4621.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Huron 1N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #2 20Jul17 kjs	Offset TVD Reference:	Offset Datum

Reference	Plan #2 20Jul17 kjs		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,682.5 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.45 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	07/20/17			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	13,455.1	Plan #2 20Jul17 kjs (Wellbore #1)	MWD	MWD - Standard	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Existing Wells Sec 34 T5N R64W						
Gamewell 34-1 - Wellbore #1 - Wellbore #1	13,455.1	6,500.0	1,090.6	930.0	6.792	CC, ES, SF
Suden 34R-323 - Wellbore #1 - Wellbore #1	13,455.1	6,646.2	245.9	110.1	1.811	CC, ES, SF
Suden 34R-423 - Wellbore #1 - Wellbore #1	13,455.1	6,685.1	115.0	38.9	1.512	CC, ES, SF
Suden 34U-243 - Wellbore #1 - Wellbore #1	13,455.1	6,661.7	731.9	572.2	4.583	CC, ES, SF
Suden 34U-403 - Wellbore #1 - Wellbore #1	13,455.1	6,721.5	1,027.8	863.3	6.247	CC, ES, SF
Existing Wells Sec. 22-T5N-R64W						
Ledford 22T-221 - Wellbore #1 - Wellbore #1	6,900.0	7,304.0	97.9	46.0	1.887	ES, SF
Ledford 22T-221 - Wellbore #1 - Wellbore #1	6,926.7	7,279.9	97.3	46.9	1.931	CC
Ledford 22T-321 - Wellbore #1 - Wellbore #1	7,200.0	7,128.8	142.9	96.2	3.060	SF
Ledford 22T-321 - Wellbore #1 - Wellbore #1	7,226.0	7,102.8	142.8	96.1	3.061	CC, ES
Ledford 22Y-341 - Wellbore #1 - Wellbore #1	248.1	239.8	261.6	260.6	253.719	CC
Ledford 22Y-341 - Wellbore #1 - Wellbore #1	300.0	291.8	261.8	260.5	200.107	ES
Ledford 22Y-341 - Wellbore #1 - Wellbore #1	6,600.0	7,595.4	645.3	587.6	11.190	SF
Ledford 22Y-401 - Wellbore #1 - Wellbore #1	0.0	0.0	280.0			
Ledford 22Y-401 - Wellbore #1 - Wellbore #1	100.0	89.3	280.1	279.8	1,277.373	ES
Ledford 22Y-401 - Wellbore #1 - Wellbore #1	6,500.0	7,696.0	958.0	899.6	16.409	SF
Huron 5N64W22						
Huron 2N - Wellbore #1 - Plan #2 20Jul17 kjs	200.0	200.0	15.0	14.2	19.667	CC
Huron 2N - Wellbore #1 - Plan #2 20Jul17 kjs	13,400.0	13,343.3	269.1	-10.3	0.963	Level 1, ES, SF
Huron 3N - Wellbore #1 - Plan #2 20Jul17 kjs	200.0	200.0	30.0	29.2	39.335	CC
Huron 3N - Wellbore #1 - Plan #2 20Jul17 kjs	300.0	299.4	30.5	29.2	23.235	ES
Huron 3N - Wellbore #1 - Plan #2 20Jul17 kjs	13,455.1	13,450.7	534.3	241.0	1.822	SF
Huron 4N - Wellbore #1 - Plan #2 20Jul17 kjs	200.0	200.0	45.0	44.2	59.001	CC, ES
Huron 4N - Wellbore #1 - Plan #2 20Jul17 kjs	13,455.1	13,376.0	789.0	496.9	2.702	SF
Huron 5N - Wellbore #1 - Plan #2 20Jul17 kjs	200.0	200.0	60.0	59.2	78.669	CC, ES
Huron 5N - Wellbore #1 - Plan #2 20Jul17 kjs	13,455.1	13,486.0	1,048.2	754.6	3.571	SF

Offset Design	Existing Wells Sec 34 T5N R64W - Gamewell 34-1 - Wellbore #1 - Wellbore #1											Offset Site Error:	0.0 usft
Survey Program:	100-MWD											Offset Well Error:	0.0 usft
Reference	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,600.0	6,647.7	6,500.0	6,499.4	126.8	16.6	78.24	-6,248.6	-1,474.2	1,628.4	1,487.2	141.16	11.536	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation